



The Australian RAINFOREST MEMORANDUM

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**Memorandum on:
Australia's Responsibility for
The Destruction of the World's
Rainforests
and
Its Obligation to Take Action for
Their Protection**

Dedication

In the last decade 110 million hectares of rainforest disappeared from the Earth, taking with them countless species of plants and animals. This Memorandum is dedicated to those extinct species and to the estimated one million species that will be lost in the coming decade unless there are fundamental changes in the way that all peoples and societies relate to nature and to each other.

Prepared by Australian non-governmental organisations.

Editors: The Rainforest Information Centre Inc. (RIC)

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This Memorandum was inspired by a West German Rainforest Memorandum, produced by ARA, the Working Group for Rainforest and Species Conservation (ARA 1989). The German Memorandum was endorsed by a coalition of 78 groups representing millions of West German citizens and had a major impact on the development of rainforest policy in that country. Rainforest Memoranda have also been developed in Belgium and Austria and are being prepared in the U.S.A., Finland and Japan. A premise of these Memoranda is that the primary way that any country can support the protection of rainforests is to examine and stop its own activities that contribute to rainforest destruction.

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PREAMBLE

The loss of the cultures and often the entire populations of rainforest dwelling peoples is one of the greatest tragedies of our time, and one of the least noticed.

Most of the native societies of the rainforest have already been destroyed (Devivere 1984). In Brazil alone, 87 Indian tribes were wiped out in the first half of this century (Caufield 1984). In the Indonesian province of Irian Jaya, the military is estimated to have killed up to 150,000 tribal people under the guise of counter-insurgency measures (Budiardjo 1989).

More than a thousand rainforest cultures still exist. Nearly everywhere they are in conflict with the development strategies of the dominant social classes and international development agencies that have taken control of their lands and who consistently ignore the basic rights and often even the very existence of these peoples (Colchester 1988). This indictment applies directly to the actions of successive Australian Governments and companies that have financed development projects involving the sequestration and destruction of the lands of native peoples. Clearing and fragmentation of the rainforests in South America, Africa, Asia and the Pacific Islands threatens to deprive the remaining rainforest peoples of their existence. If such developments continue, none of these ancient cultures will survive the next 20 years (Winter 1984). A central premise of this memorandum is that all political strategies for the use and conservation of tropical rainforests must first and foremost respect the rights of the traditional inhabitants of these areas. Guaranteeing the rights of tribal peoples is often a major step towards high quality conservation of rainforests.

I. RAINFOREST DESTRUCTION

"Unless nations change course, we face by the turn of the century, an environmental catastrophe that will witness destruction, as complete, as irreversible, as any nuclear holocaust" (Mustapha Tolba, Executive Director of the United Nations Environment Program, 1980).

I.1 The Dimension of the Problem

Over half of the Earth's tropical rainforests have already been destroyed or irreversibly damaged (Raven 1986). No one can say with any degree of accuracy how many species have been lost, but there is no doubt that contemporary rainforest destruction is leading to an unprecedented mass extinction of species (Jablonski 1987, Myers 1985). According to recent estimates, tropical moist forests contain between 50 and 90 per cent of all plant and animal species (Erwin 1983, Wilson 1988). Their destruction is not only causing the loss of individual life forms, but is leading to the alteration and annihilation of entire evolutionary processes (Sioli 1986, Myers 1988). The basis for the development of new life forms is being depleted so seriously that population geneticists refer to the current mass extinctions as not only meaning the death of species, but also an end to their birth (Soule and Wilcox 1980). The spasm of extinctions set to take place in the coming few decades will be more profound than any similar event in the last 100 million years.

I.2 The Time Scale of Concern

In 1982 the global loss of tropical forests was calculated at 11 million hectares annually, but figures released by the United Nations Food and Agriculture Organisation (FAO) in June 1990 confirmed that this was a gross underestimate.

Between 1981 and 1990, seventeen million hectares were destroyed each year. This is 60 million hectares more than the FAO has previously acknowledged: a shortfall equivalent to an area eight times that of Tasmania (Stammer 1990, World Wide Fund for Nature 1990a). The same period saw the rate of tropical forest loss double. If this rate of increase in deforestation were to continue, all remaining tropical forests would be destroyed in less than thirty years.

Practically all international programs designed to stop rainforest destruction have up until now produced negligible results (Brundtland *et al* 1987). In spite of this, many political statements recommend precautionary measures, failing to acknowledge that the dimension of contemporary rainforest destruction makes an emergency program for their protection an absolute and immediate necessity.

Effective environmental policies have usually only been developed in response to visible and tangible catastrophes. Many of the national governments in the tropics are still playing down the scale of deforestation in their own countries. The industrialised countries, who carry much of the responsibility for rainforest destruction, are failing to acknowledge the manifold ways in which their activities are leading to the destruction of tropical forests. There has been little if any political commitment, North or South, to taking on the root causes of tropical deforestation. All available evidence and scientific forecasts lead to one conclusion: fundamental and consistent remedial action for the protection of the all remaining tropical rainforests is urgently required. The coming few years are the last opportunity for effective political decisions and action.

I.3 The Limits of Reserve Strategies

The idea that the loss of rainforest flora and fauna can be drastically reduced by creating nature reserves has been a central part of all development strategies and conservation initiatives.

In the last decades the creation of nature reserves has been much too successful to question it as a strategy in principle. A significant proportion of tropical biodiversity would already be lost if nature reserves, often initiated by private conservation organisations, had not been established. Nevertheless, all too often indigenous peoples, living harmoniously with their environment, have been expelled from these protected areas or subjected to controls that have led to the disintegration of their cultures (Calhoun 1972, Survival International 1989).

It is, however, a misconception to believe that nature reserves, based on models from the temperate regions, can conserve the greater proportion of the genetic diversity of tropical rainforests. The pattern of species distribution in tropical rainforests differs fundamentally from that of forests in the temperate zones. Whereas in temperate latitudes there are relatively few species, with large numbers of individuals distributed over extensive areas, in the rainforests species often have very limited distribution. In Papua New Guinea, for example, the entire known population of an orchid species will often be restricted to just one valley (Crutwell 1990). The number of individuals of each species per area unit tends to be low, but the total number of species can be enormous. On average, ten hectares of lowland tropical rainforest in South East Asia will contain more tree species than the whole of North America (Wilson 1988). Inevitably, any large-scale hydroelectric or agricultural projects which destroy rainforests will lead to the extinction of hundreds of plant and animal species.

Only by providing the widest possible protection for the remaining primary rainforests will it be possible to save the greater part of the Earth's biological diversity from extinction. Strictly protected nature reserves can only be a supportive measure in an overall concept for the protection of rainforest ecosystems. The creation of nature reserves must not be used as a justification for the destructive exploitation of unprotected rainforest areas.

I.4 Sustainable Yield: Myths and Prospects

Sustainable yield has become the Philosopher's Stone of tropical forestry. No one has yet adequately defined it, yet everyone talks of it, and policies are prepared based on a concept that is entirely theoretical and never attained (Marshall 1990a). The Federal Government has noted that there is a global urgency to protect rainforests and that "Australia's future timber needs should be met without placing at risk the long term conservation of the rainforest resources of other countries" (Federal Government, Australia 1986). However, the timber industry and the industry departments of the Federal Government have emphasised the necessity of supporting sustainable timber extraction and forestry practices in rainforest areas. Such statements are based on the assumption that rainforests can be managed and used as an industrial resource base for timber on a sustainable basis.

Most development assistance for the forestry sector in tropical regions is predicated on this assumption. According to the FAO Forestry Department, "it goes without saying that the forest resource should be capable of providing raw material on a sustained yield basis, without upsetting the environmental balance" (FAO 1985, p.35). However, the propagation of such a strategy is unsound, and indeed dangerous, because of the lack of empirical understanding of tropical ecosystems (Lamprecht 1986). Even the FAO admits that "knowledge of tropical forest ecology and resource management is extremely limited" and that "the natural regeneration of some of the commercially valuable trees remains still an unresolved mystery of tropical silviculture" (FAO 1985).

All projects attempting to produce a sustainable yield of timber from tropical forests are still in an experimental stage. The International Tropical Timber Organisation (ITTO) has had to acknowledge that serious attempts at sustainable management of tropical rainforests for timber production are being conducted on less than one million hectares, less than 0.125 per cent of the world's rainforest area that is exploited for timber (Poore 1988). One World Bank consultant has argued that "no commercial logging of tropical forests has proven to be sustainable from the standpoint of the forest ecosystem, and any such logging must be recognised as mining, not sustaining the basic resource" (Talbot 1990).

The best example that the ITTO study could find of sustainable logging was based on research by the Queensland Forestry Department of regeneration following logging in the North Queensland Wet Tropics. This research has since been discredited. Dr. Aila Keto and her associates at the Rainforest Conservation Society of Queensland concluded in a paper presented to the ITTO in May 1990 that "the Queensland model of industrial forestry is neither ecologically nor economically sustainable " (Keto *et al* 1990).

In addition to these ecological problems, the industry lacks the institutional structures and political requirements necessary to operate free from corruption. The only systematic attempt to disclose such corruption has been in Papua New Guinea, where a recent inquiry concluded that: "there can be no doubt that the timber industry, by its very nature, is conducive to acts of a criminal nature and acts contrary to law and proper government administration " (Barnett 1989).

There is ample evidence that where tropical rainforests have been exploited with the support of industrialised countries to produce timber for export, degradation of the forest has been the result (Martin 1985). Added to the direct cost of timber operations is the opportunity cost, that is to say the foregone potential revenue, from other goods and services that intact tropical forests provide.

The first and foremost value that is being lost through tropical logging and further rainforest destruction is beyond human measuring: the extinction of tens of thousands of species each year. The most important human benefits derived from rainforests are also immeasurable, for it is impossible to put a value on the forest cultures and their wisdom of respectful coexistence that are being lost as industrial ventures take over their lands.

The ecological services which provide for the life of the forest are only just beginning to be given a value in the equations of developed societies. Throughout the tropics, rainforests act as giant reservoirs of moisture and warmth, releasing water throughout the year as the perennial streams and rivers that support the lives of billions of people, meeting the needs of 40 per cent of the farmers in the Third World (Myers 1985). Rainforests generate local and global rainfall, receiving 50 per cent of all the rain which falls on land. Nobody knows how much primary or secondary rainforest must be preserved to ensure the continuity of their characteristic climatic cycles. Current changes in the weather patterns of the Ivory Coast and the once forested coastal areas of south-east Brazil suggest that tropical deforestation is leading towards climatic disturbances of disastrous magnitude (Oberndorfer 1988).

Rainforests also provide essential and renewable sources of fruits, fibres, starches, oils, medicines, firewood, animal products, building material and other products when extraction is well managed. However, the value of rainforest goods and services to local human populations is usually ignored in the economic analyses on which development decisions are based because these societies often operate with little involvement in the money economy.

In many tropical countries, major sections of the population depend directly on intact rainforests for their daily needs (Repetto 1988). The people of Papua New Guinea, for instance, obtain 60 per cent of their animal protein from rainforest areas (Caufield 1984). In large regions of West Africa, until recently people met 70 per cent of their animal protein needs from rainforests. The situation changed as the forests were destroyed by the establishment of export plantations and timber industry (Martin 1985).

Although the careful management of non-timber forest products offers considerable economic potential for the supra-regional market, this resource is being lost through the ongoing destruction of the tropical forests (Jacobs 1984). Despite this, the governments of most tropical countries do not even gather information on the sustainable economic potential of non-timber rainforest products (Repetto 1988). In the Amazon Basin, the livelihood of over two million people is based on the collection of rubber, Brazil nuts and other "minor" forest products. These people are able to gain their livelihood without damaging the biological integrity and genetic wealth of the rainforest ecosystems (Hecht and Schwartzman 1988). Recent studies have shown that the value of non-timber forest products often far exceeds the value of timber in tropical forests. A study in the rainforests of Peru showed that the economic value of the minor forest products, including fruits, resins and medicines which were actually being marketed, exceeded the economic value of using the forest for

timber by nine to one (Peters et al 1989). However, the possibilities for the sustainable exploitation of non-timber forest products for a supra-regional or international market are limited.

According to the International Union for the Conservation of Nature (IUCN), the over-exploitation of rattan stocks in some parts of South East Asia shows that even extractive forms of usage can lead to loss of biodiversity and degradation of the forest (IUCN 1985). Assessment of the potential of non-timber forest products to provide for the market beyond a regional level must include careful ecological auditing in every case. Available knowledge suggests that the specific ecological characteristics and the soil and microclimate conditions of tropical rainforests limit the possibilities for sustainable exploitation to a much greater degree than in temperate ecosystems (Weischet 1980).

Intact primary rainforests have considerable and lasting economic potential as a storehouse of high value drugs useful in modern medicine (Wilson 1988). The economic benefits from rainforest genetic material have also been left out of the cost/benefit analyses of development projects affecting rainforest areas, although the extinction of a single plant species with genes that could be used in an agricultural crop may well represent a loss of billions of dollars (Myers 1985).

The negative effects and poor long term prospects of industrial development in tropical forests make the complete protection of the remaining primary rainforests imperative, from an economic as well as an ecological point of view. Exceptions should only be allowed for traditionally established sustainable methods of utilisation or for uses which empirical scientific studies have proved beyond doubt to be ecologically sound. These options exclude widespread forestry practices and other forms of intensive exploitation (IUCN 1985).

1.5 The Tropical Forestry Action Plan

The Tropical Forestry Action Plan (TFAP) is the first major international initiative to tackle tropical deforestation. It was launched in 1985 by four organisations: the Food and Agriculture Organisation of the United Nations (FAO), The World Resources Institute (WRI), the World Bank and the United Nations Development Program. It claimed to offer a cure for tropical deforestation and its supposed causes and that, "the initiatives proposed...will contribute to alleviating poverty, to arresting dangerous assaults on the planet's environmental support system, and to providing the basis for sustainable economic growth" (World Bank *et al* 1987). There are now 13 countries where donors have given funds to TFAP projects, 11 countries where National TFAPs are awaiting project funding, and 41 countries where National TFAPs are being drawn up (FAO 1990). The TFAPs that have reached a donor round table call for investment of over \$US 130 million per year for five years for these countries alone.

The TFAP arose out of two documents: *The Tropical Forestry Action Plan* (FAO 1985) and *Tropical Forests: a Call to Action* (WRI 1985). The flaws in the plan were apparent even in these original documents. Both asserted that poverty and overpopulation are the main underlying causes of tropical deforestation, but neither recognised the role of the developed countries. The FAO even went so far as to dismiss outright the role of the timber industry: "Forest industries have often been marked as the main culprit. The fact is that *all* of this forest land is lost to shifting cultivation, permanent agriculture, and built-up areas." Thus, one aim of the plan was to "intensify and diversify agricultural production" (FAO 1985, p.31). Other projects involved fuelwood plantations, industrial plantations and watershed reforestation.

This superficial approach paid lip service to the role of landlessness and destructive development, but there has been no real attempt in the TFAP to address these causes of rainforest destruction. The TFAP regarded deforestation as a result of too little government control over the forests and called for an ultimate aim of bringing all forest lands under government control. Rather than calling for reforms of inequitable land ownership, the TFAP often requires alienation of traditional lands into government forestry estates.

The issue over which the TFAP has been most criticised is its encouragement of increased logging in the tropics. As the TFAP sees forest destruction as a result of poverty, and the timber industry is

assumed to alleviate poverty in rural areas, the Plan sees logging as directly reducing the main underlying cause of deforestation. To the FAO, the degradation caused by logging can be seen as a tolerable trade-off.

In Cameroon, the TFAP plans to make the country the largest tropical timber exporter in Africa in the 21st century. In order to do this, 14 million hectares of pristine forest will be opened up and a major penetration road will cut through forest lands presently inhabited by Pygmy communities. In Peru, the TFAP proposes an increase in logging in Amazonia of between 390 and 590 per cent. In Tanzania, the TFAP calls for a 23-fold increase of sawnwood exports. In Nepal the TFAP calls for a 250 per cent increase in timber production. In Ghana the TFAP makes the second tranche of its loan conditional on the lifting of a ban on the export of timber from 14 tree species.

Although the TFAP has often produced statements on the need for grass roots participation, the Forestry Review Teams have spoken almost entirely with forestry departments. Of the 25 major national TFAPs only 7 involved meetings for non-governmental organisations to voice their views, and 6 of these were organised at the initiative of the non-governmental organisations themselves (Winterbottom 1990).

The lack of participation has been compounded by an obsessive degree of secrecy that has come to surround TFAP activities. Even the key documents are virtually impossible for grass roots groups to obtain.

Like many governments, Australia continues to claim that it is doing something for tropical forests through involvement in the TFAP. Before the 1990 Federal Election, Senator Richardson, then the Minister for Environment, was asked about support for rainforest conservation. He replied that "the Hawke Government supports the Tropical Forestry Action Plan and will assist in its implementation". He also referred the questioners to this reply when asked if the Government would "ensure Australia's foreign aid is not used for the destruction of tropical forest" (Australian Conservation Foundation 1990).

To date, the main involvement of the Federal Government has been in the Papua New Guinea TFAP, in which Australia led the Forestry Review Team, and to which it has pledged \$3 million. This Papua New Guinea (PNG) plan was supposed to be a model of the reformed TFAP; "an attempt to clean up our act in a major way" said Jim Douglas, the PNG TFAP team leader (Douglas 1989, p. 37).

In fact it was a model of academic mediocrity. The basis of land and resource use in PNG is customary clan land tenure, yet traditional landowners received only two pages in the national TFAP report and there was no evidence that the Forestry Sector Review Team spoke to a single landowner. Although the team did meet briefly with a few non-governmental organisations, most of their comments were ignored, and the TFAP Report was not made available to them.

It was claimed that the TFAP would raise \$US 70 million for World Heritage Areas, yet there was no attention given in the Report to how such funds could be used or administered, and PNG is not even a signatory to the World Heritage Convention. As a result there has been little donor money yet given to this project.

As usual, the PNG TFAP concentrated almost exclusively on the industrial logging industry, with the novel call to reduce the annual forest cut by half to a "sustainable yield" level. Due to statistical bungling, this reduced level was, in fact, two and a half times the existing actual annual harvest. The idea was discretely dropped (Marshall 1990b).

Even more extraordinary was that the TFAP team visited PNG in the final stages of a two-year Commission of Inquiry into corruption into the timber industry which revealed large scale corruption throughout the Government and Department of Forests, near-universal transfer pricing, corruption, and tax abuse by timber companies (Barnett 1989). The TFAP totally ignored the issue of corruption, calling for a strengthened Department of Forests and new legislation. Given the total failure of the PNG Government to use existing legislation to prosecute anyone indicted in the Inquiry, such measures are meaningless. It has been argued that whatever the failings of the PNG TFAP, it has come up with some worthwhile projects and the PNG Government should continue

with the Plan as a whole because there is no alternative initiative. Whilst it is certainly true that some projects in PNG are worth funding, there is no reason why such projects could not have been developed outside of the TFAP. Alternatives are to be found in small scale initiatives coming from the grass roots in tropical countries, not from ill-conceived large scale prestige projects such as the TFAP.

Despite the failings of the PNG TFAP, Australia is now participating in the preparation of national TFAPs for Fiji and Laos.

The vast majority of non-governmental organisations around the world concerned with the TFAP have called for a moratorium on international funding for the Plan until major structural and procedural changes are made (Colchester and Lohmann 1990). Official attempts to reform the TFAP have so far called for only superficial reforms, making no attempt to change the top-down structure of the TFAP or to take it out of the hands of the FAO.

Donor countries are now so disenchanted with the TFAP that they are becoming unwilling to fund the projects it advances. Peru, Colombia, Panama and Argentina have received less than ten per cent of the funding required for their national TFAP projects. The US Senate is now refusing to fund the TFAP at all, and Britain has said it will withdraw from the Plan entirely unless coordination of the TFAP is moved out of the FAO.

1.6 Pressure from Human Settlement and Its Causes

Population pressure is still regarded by many development institutions and politicians as the major factor causing rainforest destruction. Nobody can deny the serious global problem of population growth. However, the belief that this is the main cause of rainforest loss is used by many governments and businesses to absolve themselves from responsibility and to imply that there is little or nothing they can do to address the problem of rainforest destruction.

An examination of forest destruction on a regional basis reveals the dangerous simplification of such generalised statements:

- In South East Asia millions of hectares of primary rainforests are being destroyed by logging in areas with no pressure from local populations (Sahabat Alam Malaysia 1987, S.C. Chin 1988).
- In Central America 40 per cent of the rainforests have been cleared or burned down in the last 40 years for cattle pasture to feed the export market (Myers 1981).
- Millions of hectares of rainforest in South America are being flooded for large-scale hydroelectric projects, which are economically and ecologically devastating (Goldsmith and Hildyard 1985).
- In West Africa and south-east Brazil, millions of people are shifting to rainforest areas not because of population pressure, but because they have been deprived of their land, often through the influence of foreign companies (Schumann 1986). In many cases they are moved to the rainforests as part of ill-conceived government resettlement programs such as Transmigrasi in Indonesia, or they follow in the wake of industrial logging and mining.

On a global level, the tropical timber industry has been shown to be the main immediate factor responsible for the colonisation of primary rainforest areas (Oberndorfer 1988). A major cause of the population pressure on rainforests is the continuing consolidation of land ownership by powerful elites who displace landless poor into rainforest areas. Latin American environment groups have cited skewed land distribution as the most important factor frustrating the conservation and sustainable use of rainforest areas (World Wide Fund for Nature 1988).

The same situation applies throughout South East Asia. Land reform would not only provide for the needs of the poorest sections of these countries, but would also halt the conversion of new areas of primary rainforest into unsustainable agricultural lands. In spite of this, the problem of wealth and resource distribution is still a taboo topic in the context of development cooperation. A critical study of the reasons for the over-exploitation of tropical ecosystems by populations without land or

employment reveals the many links with the economic interests of the industrial countries. This insight must become the foundation for the reform of bilateral and multilateral aid policies and relevant world trade practices if the tropical rainforests are to be saved.

I.7 The Debt Burden

The nations of the Third World have a collective debt in excess of \$US 1,300 billion (World Bank 1988). Debt servicing in 1987 reached \$US 123.4 billion. A decrease in the loans taken up by the Third World resulted in a net capital flow to the First World in that year of \$US 30 billion.

The debt crisis has exacerbated environmental destruction in the Third World to an alarming extent. In many cases a vicious circle leads to loans used to finance environmentally destructive projects that can only be repaid through further destructive resource exploitation. The five countries with the largest rainforest areas are also among the world's most heavily indebted countries, and pressure to cut and clear the rainforests to finance debt repayment has intensified. The conditions imposed by the International Monetary Fund (IMF) often force heavily indebted countries to sell their natural resources far in excess of sustainable exploitation (George 1987).

As non-governmental organisations from the Third World have pointed out repeatedly, there will be no chance to stop impoverishment and the destruction of nature in most Third World countries without a solution to the debt crisis. An evaluation of the discussions that took place at the last IMF/World Bank Annual Meetings leads to the depressing conclusion that the worldwide appeal from nature conservation organisations, human rights groups and church bodies for a massive debt cancellation has failed to change the attitudes of the creditor countries and institutions.

II. AUSTRALIA'S RESPONSIBILITY FOR RAINFOREST DESTRUCTION

"The roots of the problem of deforestation and the waste of resources are located in the industrialised countries, where most of our resources, such as tropical timber, oil, natural gas and fish end up. The rich nations with one quarter of the world's population consume four-fifths of the world's resources. It is the throw away culture of the industrialised countries, now advertised in and forced on to Third World countries that is leading to the throwing away of the world. Such so called progress has simply lead to destruction and despair!" (Harrison Ngau, representative of Sahabat Alam Malaysia in his acceptance speech for the Goldman Environment Award 1990)

II.1 The Continuing Destruction of Australia's Rainforest

In the two hundred years since European settlement, three quarters of Australia's rainforest has been destroyed. In all the states in which significant areas remain, clearing and logging are continuing. About five per cent of Australia's forest area is rainforest, equivalent to two million hectares or about one third the area of Tasmania. Over half of this is in Queensland, about a third in Tasmania, 20 per cent in NSW and the rest is in scattered pockets in Victoria, in the Kimberley region of Western Australia and in the Northern Territory (Working Group on Rainforest Conservation 1985). Although Australia's rainforests account for only one quarter of one per cent

of the continent's land area, they are home to half its species of plants and animals. Australia has a global responsibility to preserve these forests.

II.1.1 Queensland

Queensland's rainforests are found along the east coast from the tip of Cape York to the NSW border, with smaller, scattered patches further inland. Almost all Australia's tropical rainforest is found north of Townsville. Following the World Heritage listing of the Queensland Wet Tropical Rainforests, much of the area is protected. However, real estate subdivision, logging and clearing for agriculture on freehold land are still destroying biologically invaluable areas. Fire, feral animals (pigs, cattle and cane toads) and human incursion are continuing threats to these forests and the survival of species they support (Working Group on Rainforest Conservation 1985).

On Cape York Peninsular, particularly in the Iron Range and McIlwraith Range regions, rainforests are threatened by mineral exploration, mining and the introduction of exotic flora and fauna species by people living adjacent to the forested areas (Abrahams 1989).

Between Maryborough and Brisbane, the Queensland Department of Forestry planned to clear 46,000 hectares of rainforest to plant hoop pine plantations. Over forty thousand hectares have already been cleared but it now appears likely the remaining area will be spared. The Department still allows logging of what it describes as "minor" rainforest areas inland from Rockhampton. The Department expects the levels of harvesting to decline (Department of Forestry, Queensland, 1989).

A Task Force was set up by the Goss Labor Government to investigate the proposed Tully Millstream Hydroelectric Scheme. Its findings supported the implementation of the Scheme and the Government will be making a decision on its future in April 1991. The proposed dam would be in the Wet Tropics World Heritage Area and flood 4,300 hectares including at least 135 hectares of rainforest (Queensland Conservation Council 1990). A joint submission to the Task Force by the major environment groups concerned with the issue questioned the validity of the Queensland Electricity Commission's projected power requirements for the state, and as result, the management of Queensland's power supply is being re-examined by the Government (*North Queensland Register* 28 June 1990, Rainforest Conservation Society of Queensland 1990).

An inquiry headed by Mr. Tony Fitzgerald is being conducted into logging on Fraser Island. Almost 10,000 hectares or five per cent of the island's total area of 163,000 hectares is covered with rainforest (Sinclair 1977). Logging is continuing during the inquiry despite strong protests from environmentalists. The companies logging the forest are not permitted to log old growth forest, but this has not prevented the felling of mature trees in secondary forest.

II.1.2 New South Wales

In the early 1980's public concern over the plight of the State's rainforests lead the NSW Government to increase the area of rainforest protected in National Parks and reserves from 29,000 to 80,000 hectares, protecting 21 per cent of the State's rainforest. This figure is based on the scientifically accepted definition of rainforest which includes most Brush Box (*Lophostomen confertus*) forest. Since then, although the State Government has attempted to create the impression that rainforest in NSW was safe, over 70,000 cubic metres of rainforest timber have been cut from NSW rainforests each year. This means that an area of about 800 hectares of rainforest has been degraded in that time (Pugh 1989).

The Forestry Commission's definition of rainforest is at odds with the classification favoured by most experts in the field. In the Inquiry into proposed logging at Terania Creek in Northern NSW, Professor Len Webb, a world-renowned authority on rainforest ecology, supported the claim that Brush Box is a rainforest species and that by logging Brush Box, the Commission was logging rainforests. The Forestry Commission's policy is to log Brush Box to their "economic limit" at a rate "greater than their current sustained yield capacity" (Forestry Commission of NSW 1984-85 to 1988-89).

Even forest which the Commission recognises as rainforest is being virtually clear felled. In the period from 1984 to 1989, over 30,000 cubic metres of timber from rainforest (the Commission's definition) has been harvested (Forestry Commission of NSW 1984).

Secondary rainforests containing eucalypt emergents are still being clear felled. When rainforest with eucalypt or Brush Box emergents is logged, the Commission ensures that maximum tractor disturbance and post logging burnoffs prevent the regrowth of a rainforest understorey.

Of the 140,000 hectares of forest under the Commission's control which come under its own definition of rainforest, only 8,000 are completely protected. The rest is available for "special purpose logging". The judgement of what constitutes a "special purpose" is made by whoever is in power (Working Group on Rainforest Conservation 1985).

The Environmental Planning and Assessment Act (1979) requires that the Forestry Commission assess the likely impact of any proposed logging in forest under its control. If this impact is deemed significant, an Environmental Impact Statement (EIS) is then required. A series of court cases initiated by the North East Forest Alliance (NEFA) in 1990 upheld the NEFA's contention that by allowing several logging operations to go ahead, the Forestry Commission was failing to uphold the law.

In early September 1990, State Cabinet decided to allow logging of rainforest and hardwood forest at North Washpool near Grafton in northern NSW. This area is part of the largest remaining warm temperate coachwood rainforest in the world. Cabinet's decision was made despite the recommendation of the N.S.W. Minister for the Environment, Mr. Tim Moore, that all 7,000 hectares of the area be added to the World Heritage Washpool National Park. Legal action has forced the NSW Forestry Commission to concede that a new EIS is required for the area and it has undertaken to conduct one. The issue of rehabilitation of areas that have been logged illegally is yet to be resolved. At the time of release of this Memorandum, a case was pending in the NSW Land and Environment Court over the issue. The timber industry has claimed that it is entitled to log the North Washpool area because of a 1982 agreement made by the Wran Government. However this agreement stipulated that logging of rainforests in NSW should cease by 1990.

II.1.3 Victoria

The remnants of Victoria's rainforests are found in small extremely fragile stands, primarily in Gippsland, the Otway Ranges and the Central Highlands. The largest of these is only 150 hectares. The State Conservation Strategy commits the Victorian Government to protecting all rainforest from harvesting or other disturbances. Other State Government commitments and initiatives support this requirement (Cameron 1990), and the present Minister for Conservation and Environment, Steve Crabb, has been quoted as saying "...rainforest that is absolutely rainforest is not going to be logged" (*Sunday Herald* 8 July 1990).

The Department of Conservation and Environment made what it calls a "slight amendment" to its own Rainforest Technical Committee's definition of rainforest so that the logging of previously protected areas will now be possible. The Technical Committee's definition states that rainforest "...includes closed transitional and seral communities with emergent eucalypts that are of similar botanical composition to mature rainforest." In a document called *A New Era for Victoria's Rainforest*, the Technical Committee's definition was published without this reference to eucalypts. "There can be no doubt as to which is the 'correct' definition and, to our knowledge, no rationale has ever been produced for the deletion of this critical reference from the Technical Committee's definition" writes David Cameron, a botanist employed by the Department. "The inescapable conclusion", he writes "is that the Department's management of the rainforest estate is in breach of the State Conservation Strategy" (Cameron 1990). Mr. Cameron's position is supported by the definition of rainforest accepted by the Ecological Society of Australia and is consistent with ecological practice throughout Australia. Dr Len Webb, a member of the Institute of Foresters, has said: "I cannot accept the reasoning that excludes these mixtures from the development, maintenance and continued regeneration of rainforest" (East Gippsland Coalition 1990). Mr. Crabb has dismissed the objections to the new definition and made his priorities clear: "It is a matter of semantics and I'm not having the issue driven by semantics. We have a contractual obligation to

provide a specified number of cubic metres of logs...and that's what we're going to do" (*Sunday Herald* 8 July 1990). The controversy within the Department over the definition of rainforest is yet to be resolved. In the meantime, rainforest stands with eucalypt emergents are available for logging.

Further controversy surrounds the size of the buffer zones necessary for the protection of rainforest stands. David Cameron states: "The only way to ensure the long term survival of rainforest is to provide the maximum available buffer, which normally implies the protection of entire sub-catchment units." These catchment areas are equally significant for the conservation of old growth eucalypt forests and the protection of these areas is of crucial importance to habitat management strategies for the endangered Long-footed Potteroo (Cameron 1990).

II.1.4 Tasmania

Nearly one-third of Australia's remaining rainforests is in Tasmania, an area of 711,500 hectares. In the cool temperate rainforests found in Tasmania, ferns, mosses and lichens replace the vines, palms and buttressed trunks of warmer rainforest areas (Read 1988). Approximately one-third of the island's rainforest is protected in reserves. Of the thirty-four major communities identified, however, seven are poorly represented in reserves and three have no representation at all. Nearly half of Tasmania's rainforest is located on Crown Land and much of it is threatened with logging. Approximately twelve per cent of the woodchips exported from Tasmania come from rainforest timbers. The Tasmanian Forestry Commission claims that this timber does not come from rainforest because of the presence of eucalyptus species. The Commission's approach allows the harvesting of pristine rainforest with up to ninety five per cent rainforest tree cover. The definition of rainforest accepted by the Ecological Society of Australia specifically includes such forest and their position is in line with current ecological opinion (Cameron 1990).

Large areas of rainforest have been cleared for agriculture, flooded in hydroelectric schemes and degraded by pollution from mining. The greatest ongoing loss results from fire and logging. Since 1950, about eight per cent of Tasmania's rainforest has been burnt and large parts of it have not regenerated due to the extreme vulnerability of these forests to the impact of fire. Selective logging and road building greatly increase this risk.

Myrtle wilt, a disease which kills *Nothofagus cunninghamii*, one of the two dominant tree species in Tasmanian rainforests, affects between nine and fifty-three per cent of these trees. It is clear that "any further disturbance of rainforest can only exacerbate the incidence of the disease" (Read 1988).

II.1.5 The Northern Territory and Western Australia

In the Northern Territory, rainforest is found in isolated stands in high-rainfall areas. Some are a thousand hectares or more, but most of the stands are small. They are vulnerable to fire and feral animals such as water buffalo and pigs which "damage vegetation, destroy regeneration and promote the growth and spread of weed species" (Russel-Smith and Dunlop 1983).

In Western Australia, rainforest is restricted to small, scattered areas within 150km of the coast in the Kimberley District. Most of these areas are 20 hectares or less. The existence of these areas has only been confirmed in the last 25 years and little information is available on their flora and fauna. Fire and cattle are the main threats to their survival. Some areas are protected in Prince Regent Flora and Fauna Reserve and Drysdale River National Park, but because these areas have not been studied sufficiently, it is not possible to assess the adequacy of this protection (Fox 1985).

II.1.6. The Role of the Federal Government

In the controversy over the proposed Franklin Dam in Tasmania and the World Heritage listing of the Queensland Wet Tropics, the Federal Government demonstrated that it has the power to enforce the preservation of rainforests in the face of opposition from the States. The World Heritage Properties Conservation Act (1983) empowers the Federal Government to pass regulations to protect areas it identifies as worthy of conservation (Centre for Resource and Environmental Studies 1985). The main limiting factor in Federal involvement is not constitutional power but political will.

II.2 The Impact of Australian Companies on the Rainforests of the Asia-Pacific Region

More than 150 companies with Australian investments in the mineral and energy sector are active in the region, mostly in Fiji, Papua New Guinea and Indonesia. The three largest operations in which there is Australian involvement are the Ok Tedi and Bougainville mines in Papua New Guinea, and the Freeport mine in Irian Jaya.

The Ok Tedi mine is located in one of New Guinea's remotest regions, high in the Star Mountains on the banks of the Ok Tedi River. The Ok Tedi flows into the Fly River, PNG's major river system. Forty thousand people live beside the banks of the Fly and depend on it for food, water and transportation. The Broken Hill Proprietary (BHP) is a major shareholder in the consortium (OTML) which controls this mining operation. Major shareholders in BHP include the Westpac Banking Corporation, the Government Insurance Office of NSW and the National Mutual Life Association (BHP 1989). Other investors in OTML include the US company Standard Oil and Metalgesellschaft from West Germany. The PNG Government has an 18 per cent share in the mine.

In January 1984, the tailings dam built to stop mine waste from entering the Ok Tedi River was swept away by a landslide, flooding the river with toxic wastes. Five months later, a barge carrying 2,700 drums of cyanide to the mine capsized, tipping its whole cargo into the river. Less than 5 per cent of the 270,000 kilograms of cyanide was recovered. The rest remains buried in the sediment, waiting for time and corrosion to release it into the river. Hundreds of kilometres of the Fly River have been killed. Toxic sediments from the mine are now making their way out into the Torres Strait, damaging coastal fisheries.

A huge open cut mine at Gunung Bijih in the central highlands of West Papua (Irian Jaya) is run by Freeport Indonesia, a subsidiary of the US company Freeport McRohan. The contract for the mine was signed in 1967, before Indonesia's regulations on foreign investment had been finalised, and so the mine is not subject to controls which have been imposed since then (Survival International 1990). No Australian company is directly involved in the operation of the mine, but Australian interests provide supplies and medical care for its 3,500 workers. Cairns is the Australian supply base for the mine and there are regular flights and supply ships servicing the mine from Cairns and Darwin (Osborne 1988).

Ertzberg mountain, the site of the operation, has been hollowed out by twenty years of mining. The dumping of untreated copper mine tailings into a tributary of the Ajikwa river has affected the health of the indigenous people, forty thousand of whom have been or will be displaced by the mine. They have been resettled in lowland areas where they have been unable to adapt and many contracted malaria and other diseases. Close to the mine is the Lorentz Nature Reserve. It contains one of the world's two remaining equatorial glaciers. One of its ice fields has already begun to melt due to higher temperatures and movement caused by the mine (WALHI 1990).

Conzinc Rio Tinto Australia's (CRA) Panguna copper mine on Bougainville irrevocably changed the landscape and way of life of the islanders. The mine itself covers an area of about 200 hectares and 200,000 tonnes of material were mined daily. The mine was closed in late 1989 by a campaign of sabotage which followed the failure of CRA to accede to a claim for compensation by Panguna landowners (*Post-Courier* August 24 1988).

Pollution of the Jaba River by waste from the mine is a major concern. At the time of the mine closure, there were plans to build a tailings pipeline into the nearby Empress Augusta Bay as an alternative to dumping toxic waste into the river (*ibid*). Between 1973 and 1983, about 768 million tonnes of waste and tailings were dumped into the Jaba and other nearby rivers.

The Wau-Bulolo area south of Lae was first mined for gold in the 1930's. No concern was given to the impact on the environment, and the local people were forced to work the mines under appalling conditions. Royalties were low and most of the profits went to Australia. New Guinea Goldfields, a subsidiary of the Australian company, Renison Gold, now operates the only remaining large mine in

the area. It is still polluting the Nami Creek, Edi Creek and Bulolo River with mercury, lead, cadmium and other toxic wastes. The 22,000 tonnes of toxic sediment released daily by the mine have effectively killed the Bulolo River, which now contains no fish and very little aquatic life. Half a million tonnes of soil and ore are removed each year by the mine, creating a wasteland out of once fertile lands (Wau Ecology Institute 1988, Hilton *et al* 1988).

Not far from Wau, Hidden Valley Gold, a CRA company, has discovered gold and intends mining there for the next ten to twelve years. Pollution of the Watut River is a major concern of the local communities who will have no control over the environmental impact of the proposed mine (*ibid*).

The Porgera gold mine, a joint venture of Renison Goldfields, Mt. Isa Mines and Placer (PNG) Ltd. also drains into the Fly River. The mine is expected to dump a total of 74 million tonnes of waste containing heavy metals and toxic sludge into the river system in its projected 21 year life. The company is reported to be reluctant to build a tailings dam (*ibid*).

Australian companies are prospecting in the Asia-Pacific region for gold, copper, nickel, chrome and diamonds. There is next to no documentation available on the environmental or social impact of these exploration activities. Many Australian companies are involved in the search for oil and gas in the PNG/Indonesia region. Exploration often involves forest destruction, such as the cutting of seismic transects with bulldozers through rainforests, but no environmental assessments of these operations are available.

The Australian company, Pelsart, is involved in a joint venture dredging operation at Kasongan in central Kalimantan. Nearly 13,000 tons of river bank are churned up every day to extract gold, with disastrous impact on the riverine ecology.

Rio Tinto Zinc, the British-based mining giant with a 44.8 per cent holding in the Australian company CRA (CRA 1989), has been criticised on environmental and human rights grounds for its operations in Parrenggena and Parit Cina in Kalimantan by the Indonesian environment group SKEPHI.

The Governor of East Kalimantan has asked the Rio Tinto subsidiary PT Kelian Equatorial which is beginning operations in the Mahakan River catchment to 'guide' the local people so that they understand that they must not cultivate fields in the 2,800 square kilometres of land which are now part of the company's concession (*Inside Indonesia* December 1988). Such cases of dispossession of local peoples usually result in further forest destruction as affected communities are forced to abandon fertile lands and clear new areas of forest, often on poorer soil (World Rainforest Movement 1990).

Major Australian interests (BHP, CRA and Allied Queensland Coalfields) are developing open cut coal mines in Kalimantan for export markets (Jamieson 1990, *Inside Indonesia* December 1988). Mining operations will be similar to the large open cut mines found in central Queensland, where large pits and mountains of overburden are left behind and regeneration has been largely unsuccessful. The impact will be much more severe in the high rainfall zone of Kalimantan. Large areas of forest cover will be entirely removed and local people will probably suffer forced relocation (Jamieson 1990).

Until recently, Australian companies were directly involved in logging tropical forests in the region but as far as can be ascertained, there are none doing so at present. However, foreign companies with substantial Australian operations are heavily involved in the logging or woodchipping of tropical rainforests in the Asia-Pacific region. The Marubeni Corporation, a huge Japanese conglomerate, is woodchipping the largest remaining area of mangroves in South East Asia at Bintuni Bay in Irian Jaya. Their woodchip concession was expanded by 57,000 hectares recently. The new area was excised from a strict nature reserve as a favour by the outgoing Minister of Forestry. Marubeni is a major importer of coal from Australia and a major exporter of Japanese products into Australia. The company is the second largest buyer of rainforest logs from Sarawak (Japan Tropical Forest Action Network 1990) and a major buyer of Australian woodchips (Marubeni 1989).

Bunnings, the West Australian woodchip company, recently sold its subsidiary Vanimo Forest Products, which operates PNG's largest timber development project, to WTK Realty, a Malaysian real estate company with logging concessions in Sarawak. The sale of the operations in the north-west corner of the country took place without any negotiation with the landowners, in direct contravention of the established rights of the local community. Chi Wong, the company's director, owns Richardson Wrench, a large Australian real estate chain (*The Times*, PNG 1 March 1990).

From 1982 to 1987, the Australian Government gave the Perth-based company Westralian Forest Industries more than \$2.1 million to log Fijian rainforests. Only \$500,000 in dividends was paid to Fijian shareholders. Very limited benefits reached the local people, yet it was these communities that had to bear all the costs of the degradation and loss of their forests (AIDAB 1989, *Fiji Times* 21 July 1989).

Asmus Maclean, a West Australian company, formed a joint venture with PT Sansporinda Mandiri called Mamberamo Forest Products in order to exploit a 600,000 hectare logging concession of virgin rainforest in northern Irian Jaya. The company undertook to carry out an environmental impact study, but it was to be begun at the same time as the logging and would not have been ready until two years later (*Inside Indonesia* December 1989). However, following expressions of public concern, the concession was not granted (*The West Australian* 1 February 1990).

The Snowy Mountains Engineering Corporation formed part of the venture that built the Batang Ai Dam in Sarawak, and the Export Finance and Insurance Corporation of Australia provided funding support. The dam inundated 8,500 hectares of rainforest, and involved the forced relocation of 3,000 Iban, one of Sarawak's indigenous tribes. In 1987, over 10 years since their relocation, a survey conducted among the Iban found that 78 per cent felt that they were worse off than before the dam was built; 80 per cent saw no future for their children, and 90 per cent wanted their children to leave the resettlement areas to seek employment in urban centres. Some of the displaced people were moved to palm oil plantations where they have worked for more than a decade in poverty. The promise of title to the land they worked has never been honoured and community leaders have been detained for months and severely intimidated for attempting to improve the situation for their people.

In the catchment forests of the dam, other displaced Iban are now farming unsuitable soils and endangering the last viable habitat of the Orang Utan in the State. The Australian Federal Government has so far failed to assess the environmental and social impact of this bilateral aid project, or provide funding and support to clean up the mess it helped to create in one of the oldest and richest rainforests on earth (Hong 1987, *World Rivers Review* 1990, Anderson 1988).

II.3 The Impact of Australian Development Assistance

In February 1987, acting on the request of a coalition of non-governmental aid and environment groups, the Senate established an inquiry into the environmental impact of Australian development assistance. Fifty submissions were received and five public hearings were held before the report of the Senate Environment, Recreation and the Arts Committee was tabled in Parliament on 22 December 1989.

The Committee described the record of the Australian International Development Assistance Bureau (AIDAB) in the environment area as "regrettable". It noted that out of 121 projects with potential environmental significance, more than forty-five per cent were passed through the Planning/Design phase without the consideration of environmental effects. Of those projects, more than thirty per cent had a "major negative" or "minor negative" environmental impact. Major

categories of impact were natural resource management, localised impact and environmental health/sanitation (Senate Committee Report 1989).

With regard to the Multilateral Development Banks (MDBs), the Government's response to the Senate Committee report stated that: "it will continue to pursue its policy of supporting actively, projects and programs that promote sustainable development in an environmentally sound manner. When environmentally undesirable projects are submitted for approval, Australian representatives will be directed to state Australian opposition to them and where necessary, to vote against them. The Treasury, in concert with AIDAB and the Department of Arts, Sport, the Environment, Tourism and Territories (DASETT), will provide clear direction on these issues to the Executive Directors of the World Bank and Asian Development Bank" (Federal Government, Australia 1990).

However, there will be no further inquiry into Australia's role in the MDBs and no mechanism has been set up so that Australian representatives to the MDBs will be able to assess whether projects submitted for approval are "environmentally undesirable". As long as the MDBs continue to fund massive, capital intensive developments in the energy, agriculture and industrial sectors without consulting local people, tropical deforestation and violations against indigenous peoples will occur.

II.3.1 Australia's Multilateral Aid Program

International organisations receiving significant Australian aid funding include the World Bank (\$A 43 million), the Asian Development Bank (\$A 21.3 million), the World Food Program (\$A 44 million) and the United Nations Development Program (\$A 16.8 million).

One of the largest components of the Australian aid program is the Development Import Finance Facility (DIFF) which provides aid to Australian companies to assist them to get contracts in developing countries. A total of \$A 93.3 million, or 12.5 per cent of the aid program was allocated for this purpose in 1988/90. This is one area of development assistance that has hardly been examined for its environmental impact, but given the poor record of Australian companies operating in our region (see section II.2), the DIFF is undoubtedly having a detrimental impact on environments and local peoples.

Australian aid money is contributing to major rainforest loss in many developing countries due to our involvement with the World Bank. The World Bank is providing financial support for many environmentally and socially damaging forestry loans. It recently approved a loan that supports opening 700,000 hectares of new forest areas in the Ivory Coast to commercial logging. Over 12 million hectares of tropical forest have been lost from this country in the past 30 years and it has the highest relative deforestation rate in the world: 15 per cent forest loss per year. By the year 2000, the Ivory Coast is likely to become a net importer of wood. Again, as far as non-governmental organisations have been able to ascertain, Australian representatives did not actively oppose the funding of this project.

The Bank also approved a \$US 23 million loan for a forestry and fishery project in Guinea early in 1990. This loan will help support the construction of 45 miles of roads around two humid forest reserves totalling 150,000 hectares of which some 106,000 hectares are still pristine rainforest. Two thirds of the remaining 106,000 hectares are to be opened up for timber production. The so-called forest management and protection component of this project amounts to a deforestation scheme that will lead to the devastation of these forest areas.

Another loan the Bank is now considering that would lead to massive deforestation is a proposed \$US 100 million loan to the Corporation Estatal Petrolera Ecuatoriana, for oil field development and production in the Ecuadorian Amazon. The greatest threat now facing the forests and forest peoples of the Ecuadorian Amazon is the penetration of access roads into previously impenetrable forest areas to allow oil exploration and development. If approved, the World Bank loan would enable the Corporation Estatal Petrolera Ecuatoriana to finance the construction of a pipeline and road into the Yasuni National Park, threatening the area's rich biodiversity and the Huaorani Indians (Kimerling 1989).

In India, the Bank is planning to support a \$US 130 million loan for the construction of a 55 metre hydroelectric dam and reservoir. If supported, the Sharavathi Tail Race Scheme project will lead to

the submergence of 690 hectares of evergreen forests. The area is home to countless endangered plants and animals, and presently provides essential goods and services to local communities.

World Bank-funded projects in South America have had devastating effects on the rainforests of the Amazon. Funding for the Carajas Iron Ore project in eastern Amazonia, Brazil, contributed to the destruction of a massive area of irreplaceable tropical forest and destroyed societies of indigenous inhabitants. The Bank approved loans in 1982 for this iron ore mine, railroad and deep water port development scheme. The area is now being used for charcoal fired industrial projects, mostly pig iron smelters which use the Amazon rainforests as their fuel and carbon base. The Bank, which has already disbursed its loans for this project, refuses to take responsibility for the disastrous situation which it helped to create. The Bank is not using its influence through new loans and ongoing policy dialogue to ensure that the unfulfilled conditions relating to environmental and indigenous peoples protection of the Carajas Iron Ore Project are met (Rich 1989).

Whilst major institutional reform in the World Bank is slowly beginning, progress in implementing environmental reform has been totally inadequate. Bruce Rich, Senior Attorney with the Washington-based Environmental Defense Fund points out that: "Examples from Brazil and India show that the massive social and environmental disruption which results from the mega-projects which the MDBs are continuing to fund, does not go away after bureaucratic reshuffles or concerned speeches by top-level bank staff" (Rich 1989).

A review of up-coming World Bank projects clearly indicates that it is still intending to support environmentally and socially damaging activities in rainforest areas. The following examples represent a small fraction of upcoming projects that have the potential to severely affect tropical forest areas:

- A loan to Indonesia for Transmigration Second Stage Development will lead to further destruction of tropical forests through further forest clearance at existing transmigration sites. The project contains insufficient support for resettled peoples to ensure self sufficiency or sustainable agriculture. Rare and endangered wildlife are also threatened by the project. Environmental concerns are heightened by the spontaneous transmigrants journeying to these new sites adding further stress to the indigenous people and the forests.
- Project preparation is underway for a \$US 60 million Sabah Forestry II loan in Malaysia. The project will establish a pulpwood plantation. Small scale growers will supply timber for the existing mill and/or the export market. Forty thousand hectares of trees will be established for this project. However, there are inadequate safeguards to prevent clearfelling or converting natural forests for plantation purposes. In another loan to Malaysia, massive loss of peat swamp forests will occur as a result of the Samrahan Rural Development Scheme.
- Bank support for the establishment of a tropical hardwood plantation in the Solomon Islands for a woodchip and lumber export industry will facilitate clearfelling of natural forests to make way for the plantations.
- A proposed \$US 20 million forestry loan to Sri Lanka is expected to result in accelerated exploitation of the country's forests with potentially serious ecological impacts on critical areas, particularly the high altitude montane forests which are the source of Sri Lanka's major rivers.

As long as the World Bank continues to fund major energy, industrial and agricultural projects in tropical areas and concentrate its forestry loans on industrial usage and production, Australia will be funding global tropical deforestation.

Australia, as the fourth-largest shareholder in the Asian Development Bank (ADB), is in a position to facilitate major institutional reforms, yet large-scale capital intensive projects are still being favoured instead of addressing the needs of local peoples and the poor. The emphasis of ADB projects is placed on improving the macroeconomic performance of borrowing countries, ignoring the vital issues of poverty and equitable access to and management of natural resources. Asia is witnessing an increasing number of people living below the poverty line and a widening gap between people who have access to resources and those who do not. Environmental degradation and deforestation is rampant, while the use of coal for power generation in Asia may triple in the

next ten years, greatly contributing to increased sulphur and carbon dioxide emissions. Australia could assist the ADB to play a major role in reversing these trends through the development of new approaches to meeting the needs of Asia's rapidly increasing population, based on full consultation with and support for the development aspirations of local peoples.

ADB forestry loans to Malaysia, under the name of "compensatory forestry", resulted in further environmental degradation through the construction of new roads and soil erosion from land clearing. In the Second Compensatory Forest loan, instead of regenerating the original forest, replanting was done primarily with monocultures of the exotic species, *Acacia mangium*, which degraded soil and water values and reduced habitat for local animal species. Similar forestry loans are in the pipeline for Bangladesh, Pakistan and Laos. Taking into account the present and past performance of ADB forestry loans, it appears that similar environmental degradation will occur unless a detailed and open assessment of the mistakes made during the planning and implementation of previous loans is carried out.

The World Bank now has guidelines to safeguard the rights and needs of indigenous communities, but the ADB, the largest development bank in Asia, has no such policies. Although many ADB-funded projects seriously affect tribal and indigenous people, the ADB's professional staff of more than 600 does not include one person with expertise in dealing with development issues related to indigenous people.

Previous ADB loans which have destroyed tropical forest areas include \$US 91 million for the Batang Ai dam project in Sarawak (see section II.2 for further details). Despite its new-found commitment to sustainable development, the ADB is currently considering a loan to the Mt. Apo geothermal development project located on Mindanao Island in the Philippines. The plant would be in one of the few remaining semi-intact national parks and an area of great spiritual significance to the Bagboo tribal people.

A loan to Indonesia for the construction of the 175 megawatt Singkarak hydropower scheme in West Sumatra raises concern about accelerated deforestation in Sumatra and the environmental impacts of hydropower schemes in general such as siltation, salination and erosion. The Second North Madras Thermal Power loan which the ADB will finance to the tune of \$US 150 million and a Power System Expansion loan to Sri Lanka clearly show the wasteful type of energy project that the Bank continues to be involved with. It has done little to assist industrial and domestic consumers to reduce consumption or to promote efficiency in the production or transportation of electricity. The ADB has also made no significant contribution to the promotion of alternative or non-conventional energy sources. By failing to take these steps, rainforests, the environment and indigenous and local people are continuing to be compromised.

II.3.2 Australia's Bilateral Aid Program.

Australia's bilateral aid program is administered by the Australian International Development Assistance Bureau (AIDAB). Within AIDAB the disbursement of aid is primarily the responsibility of individual country desks. However, specialised units within the Appraisals, Evaluation and Sectoral Studies Branch are responsible for providing advice and assistance to country desks. One such unit is the Environment Unit.

The largest component of the Australian aid program is untied budget support to Papua New Guinea (\$A 275 million), complemented by a small but growing project aid component (\$A 19.3m). Other major aid recipients include Indonesia, Malaysia, Philippines, Thailand, China, Bangladesh, Fiji, Vanuatu, Solomon Islands and Egypt. This aid is provided partly in the form of project assistance and partly in such forms as student subsidies and emergency relief aid.

Although the central purpose of the Australian aid program is to promote social and economic development, Australian business interests play a key role in development assistance. Australian businesses and institutions are involved in virtually every aspect of country program implementation. They provide the majority of machinery and equipment used in aid activities. Australian experts and consultants design, manage and staff more than 400 projects and other aid activities. Only Australian-owned consultancy firms are used in the program and payments to consultants totalled

\$A 72 million in 1986-87. Meanwhile, Australian manufacturers and suppliers benefit from a twenty per cent procurement preference. Primary producers sold approximately \$A 80 million worth of wheat and other food to the aid program for developmental and emergency relief activities during 1988-89. Education, training and research sectors also benefit substantially from the sale of their services to the aid program (Joint Committee on Foreign Affairs, Defence and Trade 1989).

The findings of the Senate Inquiry on Environmental Impact of Australian Development Assistance recommended that "a much more significant program of aid for environmental projects should be developed by the Australian Government". The Government's response however, has failed to make this recommendation a priority.

In July, 1989, the Minister for Trade Negotiations and Acting Minister for Foreign Affairs and Trade announced the establishment of a four year Environment Assistance Program (EAP) within the Australian aid program. Total funding is estimated at \$A 20 million. Funding for the first year of the EAP (1989-90) was \$A 4.1 million, with \$A 400,000 for non-governmental organisation environment initiatives. The EAP itself comprised only 0.36 per cent of the aid budget in 1989-90. This is less than one twelfth of the \$93 million spent on assisting Australian companies to obtain contracts overseas. Although AIDAB claims that up to three per cent of the aid program contributes to protection of the environment, very few of the projects funded under 'Australia's bilateral aid program have been specifically designed to enhance protection of the environment or to alleviate environmental degradation.

In the past, AIDAB has failed to recognise the application of the *Environment Protection (Impact of Proposals) Act* 1975 to the aid program. Like all Federal Government programs, the overseas aid program is subject to this Act. It requires that where a proposed project is considered likely to have a significant environmental impact, it shall be referred by the responsible Minister to the Minister for the Environment. The latter may require the preparation of an Environmental Impact Statement or Public Environment Report.

As a result of failing to recognise the Act, many aid projects have not been assessed to determine their likely environmental impact before approval was granted for funding. Some of these have had significant adverse impacts. These include: the Cattle under Trees project on Kolombangara Island in the Solomon Islands, the Margarini Land Settlement Scheme in Kenya, the Northern Division Rice project in Fiji, the construction of roads in Zamboanga del Sur province in the Philippines and the construction of causeways in Kiribati which seriously affected local fisheries. In Tonga, the funding of a desiccated coconut factory caused high concentrations of toxic waste and effluent to be discharged into existing water courses, subsequently polluting the water table. The Western Highway Project in Burma caused the loss of agricultural lands, disordered drainage systems and destroyed carefully constructed ponds which had been used for drinking water (AIDAB 1988). Although Australia allocated \$5.3 million in 1989-90 to provide aid for forestry in developing countries, very little has been given for the conservation and protection of tropical forests. The environmental damage caused by some poorly designed aid projects in the past has been severe (see section II.2 on Australian Companies).

Regarding development in Indochina, Australia has indicated that it is a strong supporter of the general approach adopted by the Interim Mekong Committee (IMC). It announced to the thirty-first session of the IMC that AIDAB will work with the Committee in a far more programmed way and establish a core program of assistance through which Australia can set minimum annual levels of its support. Although AIDAB claims it is not directly funding large controversial hydroelectric dam projects through its contributions to the IMC, it nevertheless has been supporting the Secretariat for years, thus making it involved with the entire program. Increased general support to the IMC at this time indicates support to proposed major hydroelectric and irrigation schemes that will have disastrous environmental and social ramifications.

One such project is the proposed Nam Theun 2 earthfill dam on the upper reaches of the Theun tributary in Laos, now under feasibility study by the Snowy Mountains Engineering Corporation. This dam is to be built in an extensive mountainous primary forest harbouring a host of rare wildlife including the Asian elephant and sooty babbler. Two proposed protected areas which would be

affected by the dam have recently been assigned high priority for research by the IUCN and the Lao Forest Resources Conservation Project. Both areas contain prime tracts of tropical mountain evergreen forest, whilst the Nakhay Plateau area is dominated by additional swathes of dry evergreen forest. These two areas retain well over four-fifths of their original forest cover (Lohmann 1990).

The IMC is suggesting that a major percentage of its funds be spent on power schemes by the year 2000. Along with the Nam Theun 2, the proposed \$US 120 million Pak Mool dam will degrade local fisheries, damage religious sites and drown rapids valuable for tourism. Although this project has been approved in principle by the Thai Cabinet, protests by the hundreds of people it would displace have stalled any development at this stage. The proposed Pa Mong concrete gravity dam across the main stream of the Mekong between Laos and Thailand would lead to the inundation and degradation of large areas of sustainable aquatic and agricultural systems. Pa Mong would disrupt coastal ecosystems and long-standing patterns of farming, altering the balance of fresh and salt water (Lohmann 1990). A Swedish firm is now studying various aspects of this project, and as with other large Mekong Committee projects, Australian, Swedish or Japanese firms would be likely to play leading roles in construction. By continuing to be a major contributor to the IMC, Australia appears to be ignoring the lessons of the past. There are many examples of hydroelectric and irrigation schemes that have devastated tropical forests, farmlands and displaced millions of people. Technical advice for these controversial projects is offered without any attempt to present or promote alternative development paths. No funding to research energy conservation, end-use efficiency or alternatives to big dams in Thailand and Indochina is being carried out or even proposed by AIDAB.

Meanwhile, the IMC has been advised that AIDAB would be interested in funding the Long Xyuen project out of the Environment Assistance Program (EAP). This project involves the planting of eucalypts in the flooded wastelands of the Long Xyuen Quadrangle and the establishment of a forestry industry to supply the paper and fuel requirements of the region. A former project that involved the planting of eucalypts for the paper industry in Vietnam is the Bai Bang project supported by the Swedish overseas development program. This project has been widely acknowledged to have been a disaster in terms of its effect on local farmers and their livelihoods.

As for projects Australia is directly involved with, such as the construction of ports and bridges in Laos, Australian environmentalists have not had sufficient opportunity to comment in conjunction with Thai and Lao non-governmental organisations on the environmental suitability of these projects before they have been approved. With the Secretariat trying to thrust major hydroelectric dams into the foreground, Australia's role in supporting the IMC and at the same time talking of environmental protection is highly questionable. As yet, Australia has not released relevant documents on the Mekong projects it is involved with to non-governmental organisations, despite its rhetoric about freedom of information on its development assistance activities. As the IMC has denied access to information, Australia must reconsider its support until this basic requirement, essential for the delivery of beneficial aid, is met.

If, as Senator Evans claims, "the whole of the Australian aid program will be oriented towards the promotion of sustainable development" (Stensholt 1990), then Australia must adopt policies that will truly reflect this commitment.

II.4 The Tropical Timber Trade.

Australia contributes to rainforest destruction by importing tropical timbers.

The following quotation from Marius Jacobs, who was one of the world's foremost tropical forest ecologists, highlights the destructive and shortsighted nature of the commercial logging of tropical forests:

"... it is hard to think of a manner of utilization more wasteful for the present and more destructive for the future. A finely tuned, slow-motion ecosystem, a 'factory' capable of yielding hundreds of exquisite products, some of which are highly valued in international trade, is ripped open by bulldozers that pull the very pillars supporting its roof, while quantities of scarce minerals that the ecosystem might convert into fruits, latex, medicine, spices, stimulants and other precious articles, are lost in the process. To obtain a few useful species, all others are left to their fate. It seems almost too clumsy an approach to spend any more words on..." (Jacobs 1987).

In South East Asia where Australia gets most of its imports, logging is the most significant cause of deforestation (Secrett 1986). On a global scale, only clearing for agriculture is a more important agent of deforestation (Michels 1988). According to the World Bank, commercial timber felling is responsible for the destruction of five million hectares of tropical rainforest annually (World Bank 1988).

International timber traders emphasise that the quantities of tropical timber exported are relatively small (five to seven per cent of the total amount logged), but a regional survey shows that the proportion exported by the seven largest tropical timber producing countries is 19 per cent (Nectoux and Dudley 1987). In Malaysia, where most of Australia's imports come from, the proportion is much higher.

Commercial logging is only selective in the sense that it mostly affects primary forests, which in ecological terms are the most valuable and vulnerable. The damage which commercial logging operations cause in tropical rainforests is not at all selective. Roding, loading areas and log extraction paths can leave as much as 40 per cent of the soil exposed, and a canopy reduction of up to 60 per cent is not uncommon (IUCN 1985, Chin 1988).

Due to the restricted range of a large proportion of rainforest flora and fauna, where a single valley may provide the total habitat for a species, rainforest logging must inevitably lead to extinctions. Logging in tropical forest dramatically reduces species diversity. A study in Kalimantan comparing primary rainforest with secondary rainforest 30 years after logging revealed a decline in tree species of twenty per cent (Abdulahadi et al 1981). A study on low intensity selective rainforest logging in Uganda found that five of the seven primate species living in the area were seriously affected (John and Sjkopura 1987). Plant and animal species not directly affected by rainforest logging become extinct if other species that they are dependent on are lost. For every plant species that becomes extinct, another 20 to 30 animal species will also be lost (Ehrlich and Mooney 1983).

The financial rewards of logging operations seldom go in significant amounts to the rightful owners of the affected land, or to the poor of the countries concerned. In Papua New Guinea and Sarawak, two major sources of timber imports for Australia, widespread corruption in the timber industry has meant that the rewards are reaped by the rich and powerful. The corruption found in the PNG industry has already been described (Section I.4). In Sarawak, during the campaign for the 1987 state election, it was revealed that logging concessions were allocated by those in power to associates and relatives, and that the Chief Minister had attempted to obscure his substantial timber interests with a web of nominees and bogus companies (Sahabat Alam Malaysia 1989).

Estimates of the time it will take for all remaining accessible primary rainforests in Sarawak to be logged out range from seven to eleven years (Chin 1988, Cranbrook *et al* 1990). There are thirty-three countries now exporting tropical timber. A World Bank study estimated that all but ten of those will be net timber importers by the year 2000 (World Rainforest Movement 1990).

Strong and growing grass roots opposition to logging has been seen in every country in our region. The struggle of tribal cultures in Sarawak affected by logging operations has been the chief issue which raised the concern of the Australian public about the impact of the tropical timber industry.

A report commissioned by the Sarawak Government in 1987 clearly reveals the suffering inflicted on the state's indigenous inhabitants (Jabatan Pamban Negeri 1987). However, the report was suppressed by the Government and its recommendations ignored.

International concern over the impact of the timber trade on tropical forests is growing. The Austrian Parliament voted unanimously in favour of a ban on timber imports from non-sustainable sources in July 1990. The Netherlands has signalled its intention to impose a ban on the importation of tropical timber from non-sustainable sources by 1995. The Prime Minister of PNG, Mr. Rabbie Namaliu, called on importing countries to impose "restrictions on tropical timber not supplied from genuine sustainable yield projects" (World Wide Fund for Nature 1990b). His appeal highlighted the problems faced by producer countries in attempts to control the industry and the importance of controls being imposed by the importing countries.

It is clear that tropical timbers are not a necessity for Australia. There are alternatives available, and their availability will increase (Cullity 1990). In Victoria, union bans have stopped the use of rainforest timber form-ply on building sites without creating economic disruption.

In Australia there is widespread opposition to the continued importation of rainforest timbers from environmentally unacceptable sources. The term "environmentally unacceptable" is used here to refer to timber harvested in a manner which adversely affects the ecological integrity of the area or its ability to support the local people dependent on the forest.

Australian conservation and aid groups active on tropical forest issues have been unanimously calling on the Federal Government to ban the importation of tropical timbers from primary rainforests and to assist in the protection of tropical rainforests in our region. Trade Unions have been active in imposing bans on the use and importation of tropical timber.

Rich countries, including Australia, have a responsibility to help people in the poorer countries and to help improve the standard of life in those countries. Yet, the profits of the timber industry do little for the poor people in these countries, and the environmental destruction involved with it hits them worst of all. The possibility of using the forests for timber production should not be ruled out entirely, but can only be supported when it does not adversely affect the biological value of the forests and when the local communities fully benefit from it. Until and unless this happens, Australia should be compensating countries for any loss of their timber revenues in ways that directly help these people.

Australia's share of the tropical timber sold on the world market is small. However this cannot be used as an excuse to continue the trade. By being involved in this trade, Australia contributes to rainforest destruction not only directly but by implicitly condoning one of the main causes of destruction in tropical forest. As long as Australia continues to import tropical timber from non-sustainable sources, it is in no position to make pronouncements on what other countries should be doing to preserve their rainforests. As explained above (see section I.4) no tropical timber currently entering Australia comes from sustainable sources and it remains doubtful whether sustainable harvesting is possible.

The Federal Government's rainforest conservation policy states that "Australia's future timber needs should be met without placing at risk the long term conservation of the rainforest resources of other countries" (Federal Government, Australia 1986). By continuing to import rainforest timber from non-sustainable sources, Australia is clearly contravening this policy.

II.5 Summary

Environmental organisations in the Third World are constantly pointing out the decisive role of industrial countries in rainforest destruction.

The foregoing examples show the large extent to which the Australian Government is causing, exacerbating and tolerating destructive processes which it could help to prevent.

The activities of Australian corporations both in Australia and the region are responsible for the ongoing degradation of huge areas of rainforests. Our consumption of timber, minerals and agro-industrial products from rainforests is a significant factor contributing to the progressive destruction of tropical ecosystems. Through its bilateral and multilateral development activities and its support for multilateral development banks and international development institutions, Australia is also responsible for nature destroying development projects which have replaced rainforests with industrial areas, dams, plantations and wastelands.

These development activities have sacrificed long term ecological and economic values for the sake of quick profits. They have been implemented in spite of fierce opposition from local peoples and ecological and civil rights groups.

The destructive projects outlined above are not isolated cases. Unfortunately, they represent the general picture of economic and development cooperation with Third World countries. These projects are the outflow of a development model which is insensitive to local needs and ecological constraints. They are part of a development policy whose principal aim is to ensure that a large proportion of the loans or gifts provided flow back to the donor countries, or further their economic or political interests (George 1987, Frankfurter Rundschau 1988).

Instead of limiting its development assistance to projects that are geared to the needs of local communities and the environment, the Australian Government continues to base its development policy on the support of projects that promise quick economic return. In this context, the environmental reforms implemented as a result of the recent Senate Inquiry will have little more than a cosmetic effect, at best modifying some of the worst development damage.

Further financial contributions to multilateral development institutions without fundamental changes in their policies and practices serve least of all the aim which the Federal Government, judging by its declarations on this subject, has close at heart: the protection of genetic and natural resources.

The measures taken up until now by the Federal Government are especially wanting in one essential element: the readiness to realise that it carries a far-reaching responsibility for the protection of rainforests in our region and that Australia needs to make fundamental changes in its political and economic behaviour towards the Third World. This criticism is directed to the Federal Government, and all parties that have carried governmental responsibility.

III. REORIENTATION OF POLICY: RECOMMENDATIONS TO THE AUSTRALIAN GOVERNMENT REGARDING THE PROTECTION OF THE WORLD'S RAINFORESTS

"If there is to be even a small chance to relax the pressures on tropical biota, fundamental changes in the World Trade system and the basic relationships between rich and poor nations must take place" (Anne and Paul Ehrlich 1988).

In view of the moral obligation which ensues from Australia's present involvement in rainforest destruction and its responsibility to protect rainforests, the undersigned organisations make the following recommendations:

Guiding Principles

The Federal Parliament of Australia should adopt a binding set of rules governing all decisions relating to rainforests based on the following three principles:

- I. The right to cultural survival for all tribal peoples is inviolable. All possible efforts should be made to support and safeguard their rights and those of other forest dwellers, in particular the right to security of land tenure.
- II. All remaining primary rainforests (see note 1 below) should be guaranteed absolute protection, only allowing activities that do not compromise biological diversity or ecological integrity.
- III. All remaining areas of secondary rainforests which provide habitat for rare and endangered species should only be used in ways that conserve their biological diversity.

Policy Proposals

In the spirit of these guiding principles, we call on the Federal Government to adopt the following policies:

1. Domestic

- 1.1 Protect all remaining rainforest areas in Australia. Ban logging and woodchipping of rainforests and the export of these products.
- 1.2 Stop the use of rainforest timbers by the Federal Government. This restriction must apply to all activities funded by the Federal Government, including State and Local Government projects and community schemes.
- 1.3 Adopt a program for the restoration and regeneration of degraded rainforest ecosystems. In view of the fact that immense areas of rainforest have already been destroyed, a program is also needed to restore and regenerate former rainforest areas.
- 1.4 Promote timber supplies from mixed species plantations of both quick growing structural timbers and slow growing, high quality timbers.

2. Trade

- 2.1 Ban the importation of timber from primary rainforests. Timber from secondary forest should only be allowed into Australia when the producer can prove that:
 - a) the scale and extent of logging operations are such that they do not threaten the area's ecological integrity or its ability to support local people presently dependent on the forest area.
 - b) the forestry operation is conducted with the full agreement of customary landowners.

The onus of proof that imported timber meets the above conditions lies with the producer.

- 2.2 Restrict the import of other products that contribute to rainforest destruction if this is considered appropriate (see note 2). In order to develop the necessary mechanisms to restrict these imports, the Government may convene a multi-disciplinary working group, with representation from

relevant non-governmental organisations and specialists, to research and develop recommendations concerning the full range of products imported into Australia that contribute to the destruction of rainforests.

3. Aid

3.1 Redefine the basic policies and practices of bilateral and multilateral development assistance so that these programs are in accord with the Guiding Principles of this Memorandum. The policies and practices that follow from this redefinition will entail:

- a) immediately withdrawing funding from ecologically destructive development projects;
- b) issuing directives for development assistance that are in accordance with the guiding principles above and withdrawing from those multilateral institutions that are not willing or able to comply with them;
- c) recognising local peoples and their representatives as equal partners in the planning and implementation of development projects and ending support from any projects that do not have their approval;
- d) joining the international moratorium on funding of the Tropical Forestry Action Plan until its activities conform with the Guiding Principles of this Memorandum;
- e) ensuring that priority is given to projects and programs which:
 - assist with the long term conservation of remaining primary rainforests;
 - restore and regenerate former forest areas;
 - support local initiatives to increase self sufficiency and meet subsistence needs;
 - promote energy and resource conservation;
 - support integrated regional development programs for land reform and to stop land flight (see note 3);
 - re-establish socially equitable and ecologically appropriate agricultural practices;
 - explore by empirical methods, ecologically sustainable rainforest uses, giving special consideration to the traditional practices of forest users (see note 4);
 - fund education programs to inform the Australian public about the factors that contribute to rainforest destruction, the need for Australia to consume less of the world's resources and its obligation to provide substantial financial support for conservation programs in the Third World.

3.2 Open all planning and examination procedures to public scrutiny, including details of Australian participation in the boards of multilateral development institutions such as the World Bank.

3.3 Establish an independent, multi-disciplinary committee to assess the social and ecological compatibility of development projects at all levels of planning and implementation.

3.4 Apply the *Environment Protection (Impact of Proposals) Act* to all Australian development assistance, both bilateral and multilateral.

4. Companies

4.1 Establish guidelines for companies operating in rainforest areas that are in keeping with the Guiding Principles of this Memorandum.

4.2 Develop legal instruments that ensure liability for environmental destruction caused by Australian companies operating outside of Australia.

4.3 Stop all forms of government support for companies engaged in destructive activities in rainforest areas.

4.4 Develop appropriate measures to stop the use of Australian capital for socially and environmentally destructive purposes.

5. International

5.1 Exert influence to secure the immediate cancellation of debts where debt servicing and repayment are contributing to the destruction or over-exploitation of natural resources. In the framework of debt remission, new avenues of financial assistance should be charted that are consistent with the needs of the environment and human populations.

5.2 Establish, finance, and seek support for an international fund for compensatory payments to countries that refrain from degrading and destroying rainforests.

5.3 Actively promulgate the above recommendations and guidelines as an international framework for rainforest policy.

Notes

1. "Primary rainforest" is taken here to mean forest that has not been subjected to large-scale anthropogenic or natural disturbance and where the natural dynamics of the forest remain intact. We recognise that rainforest ecosystems are dynamic and continuously changing, and therefore do not wish to have "primary" taken as meaning only those forests in climax equilibrium.

"Secondary rainforest" is taken here to mean forest that has been altered in a major way by anthropogenic causes. In particular this refers to forest that has been logged.

2. "Other products that contribute to rainforest destruction", may include:

- cash crops and plantations which displace rainforest areas, such as coffee, rubber, palm oil, soya, or beef;
- minerals extracted under conditions that destroy and degrade rainforest ecosystems;
- non-timber forest products that are extracted in such a way or at such levels as to degrade forest ecosystems;
- timber from plantations that displace rainforest areas.

3. The term "land flight" refers to people being forced off their land by environmental degradation, low prices for their produce, high overhead costs, the actions of wealthy landowners or similar forces.

4. "Ecologically sustainable" is taken here to refer to activities that do not lead directly or indirectly to the conversion of primary forest to secondary forest or deforested lands.

Modifications that occur through these activities should be minimal, seek to replicate natural disturbance, and should be strictly within the limits of a forest's regenerative capacity. Activities should not lead, even in the long term, to loss of nutrients or the endangerment of biological diversity.

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ORGANISATIONS AND INDIVIDUALS ENDORSING THE AUSTRALIAN RAINFOREST MEMORANDUM

Australian Conservation Foundation (Melbourne)
The Wilderness Society (Hobart)
Friends of the Earth Australia (Sydney)
Greenpeace Australia (Sydney)
The Rainforest Foundation (Sydney)
Earth Repair Foundation (Hazelbrook)
The Australian Freedom from Hunger Campaign (Sydney)
Community Aid Abroad (Melbourne)
Dr. Bob Brown (Hobart)
Melbourne Rainforest Action Group
Sydney Rainforest Action Group
Adelaide Rainforest Action Group
Canberra Rainforest Action Group
Brisbane Rainforest Action Group
Perth Rainforest Action Group
The North East Forest Alliance (Lismore)
The Uniting Church Social Responsibility Committee (Recommendations only) (Sydney)
Victorian Rainforests Sites of Significance Action Group (Melbourne)
The North Coast Conservation Council (Lismore)
The Environmental Defenders Office (Sydney)
The Academics Union of NSW (Sydney)
The Seaman's Union of Australia - Sydney Branch
The Newcastle Trades Hall Council
The Waterside Workers Federation - Sydney Branch
The Australian Third World Health Group (Sydney)
Asia Pacific Action Group (Hobart)
Money Matters: Ethical Investment Consultants (Sydney)
Action for World Development - NSW Branch (Sydney)
South Coast Trades and Labour Council (Wollongong)
Green Appeal Inc. (Sydney)
Ethinvest Pty. Ltd. (Sydney)
Wildtran Ltd. (Sydney)
Committee on Solidarity with Latin America and the Caribbean (Sydney)
Jenny Kee Pty. Ltd. (Sydney)
Friends of Penan (Lismore)
Environment Centre, Northern Territory (Darwin)